

NEWS



Published by COLORTRAN INDUSTRIES, INC. — A BERKEY PHOTO COMPANY

VOLUME 1 / NUMBER 2

SPRING, 1967

SOFT-LITES HELP CUT "SAUCER" FILM SHOOTING TIME

Originally scheduled for three months shooting on location in Spain, "The Bamboo Saucer"—a feature film produced by Jerry Fairbanks Productions of California—was actually shot here in Hollywood and on location in California within a month. Producer Jerry Fairbanks was recently quoted as saying "Movies running away to distant countries can now be made here better because of the efficiencies of the crews, better facilities and the greater talent pool."

Academy Award-winner Hal Mohr (ASC) was chosen as Director of Photography for "The Bamboo Saucer," with Bobby Comer (Local 728, IATSE) acting as his Chief Set Electrician. Mohr has shot such films as "A Midsummer Night's Dream," "Destry Rides Again," "Watch on the Rhine," "The Four Poster," "Member of the Wedding" and "Phantom of the Opera," among many others. About Bobby Comer, Mohr has the following to say: "Comer is a magnificent gaffer and he worked with me very closely. Between us, we were able to work out a method of lighting the sets involved in 'The Bamboo Saucer' that made it really possible to shoot this picture in four weeks."

For lighting the tight main "saucer" set and "saucer" interior set, Mohr basically used *four* ColorTran 4000-watt "quartz" Soft-Lites and *two* ColorTran 2000-watt "quartz" Soft-Lites. Concerning his heavy reliance on the use of



Soft-Lites, Mohr said: "I attribute a great deal of the speed of photographing to the fact that I didn't have to re-light the sets for every change in camera position."

The "saucer" itself was a full scale model with about a thirty foot span, placed on a forty foot set. There was no way of introducing light from the top of the set, which made it difficult to get any fill or exposure light of any kind. The set itself was supposedly in a ruined church where the flying saucer had landed . . . and the only apparent source of light was from outside the building, through broken walls and where there had been doors and windows.

The basic lighting scheme for this set

called for a *soft*, general fill light. The ColorTran Soft-Lites projected enough fill light to provide the illumination for Mohr's general exposure. Mohr was able to read about 200 footcandles of fill light supplied only by the six ColorTran Soft-Lites . . . which was all the exposure light he really desired.

The "saucer" interior set was about fifteen feet across and about eight feet high. Mohr had to photograph through the open side and roof of this set most of the time. The heavy use of the ColorTran Soft-Lites permitted Mohr to produce a general soft light throughout this set, with highlights coming from the instrument panels and as reflected light through the port holes.



NEWS IN BRIEF...

IES LIGHTING SYMPOSIUM IN MAY '67

Sponsored by the Illuminating Engineering Society, the 3-day Third Annual "Theater, Television & Film Lighting Symposium" will be conducted at the Hollywood Roosevelt Hotel in Los Angeles during May 14, 15 and 16, 1967. Charles J. Neenan, Chairman of the IES Theater, Television & Film Lighting Committee, indicates that a full program is being planned demonstrating the latest progress in lighting practices for motion pictures, television and theater. Those interested in obtaining further information, as well as registration forms, should write at once to:

Richard B. Glickman
Chairman, Symposium Committee
c/o ColorTran Industries, Inc.
P.O. Box 188
Burbank, California 91503

ROMANIAN CAMERAMEN TOUR COLORTRAN



Milton Forman, President of ColorTran Industries, Inc. and ASC Associate Member (center), converses with visiting Romanian Directors of Photography Costache Ciubotaru and Alexandru Intorsureanu at a recent meeting of the American Society of Cinematographers. The two Romanian cameramen were participants in the International Visitors Program sponsored by the U.S. Department of State. In cooperation with this highly important international exchange program, ColorTran arranged an extensive plant tour for the visiting Romanians. Highlight of the tour was a lively discussion between the guests and ColorTran's engineering staff concerning film equipment design.

COLORTRAN PARTICIPATES IN USITT "TRAVEL GRANT"

ColorTran Industries, Inc. (A Berkey Photo Company) is participating in a special student "travel grant" program sponsored by the Southern California Chapter of the United States Institute of Theater Technology. Mert Cramer, Chairman of the Southern California Chapter of the USITT, points out that the new "travel grant" program is meant to encourage student members of the Chapter to attend USITT Conferences conducted in other parts of the country or Canada. As part of this program, participating companies will cover the round trip air fare expenses for student members chosen by the Southern California Chapter, USITT. It is hoped that many more companies will soon participate in this worthwhile program.

USC CINEMA CLASS VISITS COLORTRAN



Jack Horne, ColorTran's General Sales Manager, discusses the latest types of tungsten-halogen "quartz" lighting fixtures and solid state lighting control equipment with a visiting University of Southern California cinema class. Horne also demonstrated the newly introduced ColorTran Hydraulic Crab Dolly to the class. Arrangements for this special session, held in ColorTran's demonstration room, were made by USC Instructor Gene Peterson in order to acquaint his class in cinema with the widest range of commercially available professional film lighting and production equipment.

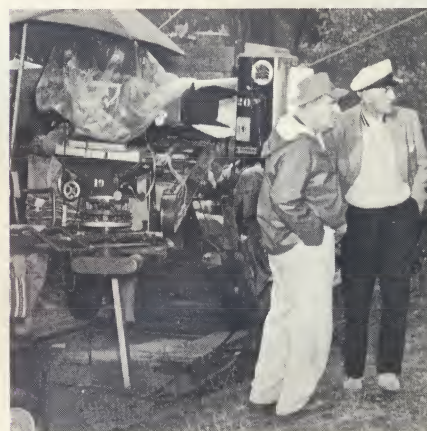
NEW CINE CALCULATOR AVAILABLE FROM COLORTRAN

ColorTran Industries, Inc. has recently been appointed as the exclusive United States and Canadian distributor of the new "Samcine" Depth of Field Calculator & Film Conversion Chart, manufactured by Samuelson Film Service Ltd. in England. Both the Calculator and Conversion Chart are supplied in a pocket size transparent plastic case, in 16mm or 35mm versions... with choice of data in either feet or meters. The "Samcine" Calculator has easy to read straight line scales which cover the full range of fixed focal length lenses that are now in daily use. The reverse side has a completely new type of display by which

it is possible to read the depth of field of a 10:1 to a 20:1 zoom lens set at any focal length, at any distance and at any aperture. The new "Samcine" Conversion Chart contains all the standard film conversions, plus information not previously available in similar conversion charts. The "Samcine" Calculator/Conversion Kit is available from your local ColorTran dealer.

COLORTRAN HOSTS CFI FILM SEMINAR SESSION

ColorTran played host to one of the sessions of the recently held 3-day workshop-seminar in Advanced Film Techniques sponsored by Consolidated Film Industries, one of the major film laboratories in Hollywood. The full morning session was conducted by Charles G. Clarke (ASC), who lectured on "Lighting and the Director of Photography." Making use of the full complement of lighting equipment available in ColorTran's demonstration room, Clarke showed the actual effects of different types of lighting fixtures when used singly and in groups. Author of the well known text "Professional Cinematography," Clarke is also an Instructor in Advanced Cinematography at UCLA. Clarke's article on lighting techniques, specially written for this issue of ColorTran NEWS, appears on the next page.



Director of Photography Charles G. Clarke is shown (left) discussing a scene with Director Henry King during the filming of "Carousel."



Vol. 1 / No. 2

Spring, 1967

Published by

COLORTRAN INDUSTRIES, INC.

1015 Chestnut Street
Burbank, California 91502
(213) 843-1200

A Berkey Photo Company

Editor: Charles Lipow



Speaking of Lighting

By Charles G. Clarke (ASC)

In motion picture or television studio use, is there a difference between "using lights" and "lighting"? Flooding a scene with enough light to obtain an exposure is *not* lighting. By lighting we mean the creative employment of light units to effectively illuminate an object so that it appears to its most favorable advantage.

Two floodlights on each side of the lens will illuminate a bottle of beer but the result will be flat and uninteresting. A source spotlight on one side, a fill light on the other, and perhaps a soft back light will make this same bottle appear to have form and dimension. It will then look as nearly like the real thing as it is possible for it to appear in two-dimensional photography.

Like so many other things in life, there is no great mystery about lighting. While it is an art, still it is based upon the use of good old-fashioned common sense. All we have to do is to look back to nature to find the rules. Over the ages man has developed a set of mental standards to judge form and distance by the only source of illumination at hand—the sun.

The sun is the "key" source. As sunlight reaches the earth's atmosphere, part of it is diffused, creating the "fill" and "surround" light which illuminate the shadows. When we substitute man-made lights, we try to use them in such a way as to simulate the lighting effects of nature.

But this does not mean that the lighting in nature is always of one set pattern. There are endless variations of the ratio between the source and fill light—and the different angles and elevations of the source light itself. All of these variations are made use of in artificial lighting depending upon the sort of object we wish to light and the general mood of the scene.

On an overcast day there is nothing but fill light, but it originates from *all* directions—front, side, and rear. We might illuminate that frosted beer bottle with this sort of lighting and it would look well, especially if we used a lot of that fill light from the rear. Most glass objects look rich and lustrous with this type of "high-key" lighting.

We might do well here to redefine the terms "high-key" and "low-key," for there is still some confusion about their meaning. "High-key" is understood to mean a sort of lighting where the fill light about equals the source light—a scene fully lighted but rather flat. There is a place for it in baby pictures, for instance. "Low-key" means that there is a big difference between the amount of fill light and the source light used—little or no light on the shadow side as compared to the bright source light. Where the ratio between fill light and source light is about fifty percent, then we would call this normal day lighting. In other words, if the light source on our meter read 100 footcandles and the fill light read 50 footcandles, then we would have a two-to-one ratio—a normal lighting balance for color film reproduction. "High-key" would be a ratio of one-to-one, while "low-key" would be a ratio of *anywhere* from six-to-one to where there is *only* source light and *no* fill light.

The position and angle of the key light is highly important to best portray form and to flatter appearance. While there can be no fixed rules for the exact position for every subject, a safe place to start is with an elevated light that strikes the subject on a three-quarter front angle. I go into the reasons for this more completely in my book *Professional Cinematography*, published by the American Society of Cinematographers. This book covers many practical examples of lighting which this short article does not permit. Here I can only suggest some of the basic rules for using the several kinds of lighting equipment available.

Various types of source lights (also called key lights) are made to fill the needs of different users. These source lights are a form of spotlight and are intended to simulate the quality of direct sunlight. They produce a crisp, strong highlight which creates sharp, well-defined shadows. This kind of light is useful to delineate form, contour, and dimension.

If your work is done in small scale, then the smaller units of these spotlights are sufficient. For larger sets, the bigger and more powerful lights are used to cover the required area with a one-source light. As the sun never casts double shadows, we are not

Editor's Note: We are pleased to present this original contribution to ColorTran NEWS written by the noted Director of Photography, Charles G. Clarke (ASC). Clarke has been nominated for Academy Awards for his photography in such 20th Century-Fox films as "Carousel," "Moontide," and "The Man in the Gray Flannel Suit." Among some seventy features, he was also Director of Photography of such films as "Night People," "The Wayward Bus," "Guadalcanal Diary," "The Sound and the Fury," "Junior Miss" and "The Big Lift."

accustomed to see overlapping shadows. Therefore we never use two spotlights from the same area in order to build sufficient light for proper exposure. It is far better to have one source lamp of sufficient power if for no other reason than that people look awfully silly with double nose and chin shadows. If people look unnatural, then it follows that objects will look the same.

By the same reasoning, source lights originating from different directions are unnatural and therefore unrealistic. We sometimes see this in television lighting of news commentators where two high spotlights are used from opposite three-quarter angles. Two chin shadows are projected on both lapels of the coat, and there is a "Hitler mustache" under the nose of every newsman—a shadow cast by these two side spotlights. They would look much better if only one spotlight were used and the shadow side filled with a soft-source type of light—even if it had to be high in a television studio. Ordinarily we would prefer to have the fill lights about head height.

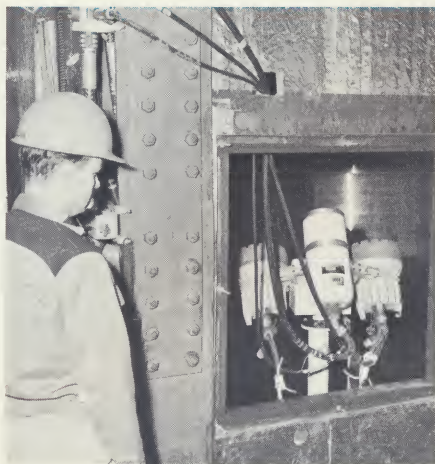
The output of the spotlights can be modified as taste demands by the use of spun glass and scrim diffusers placed in front of the light. In this manner a softer shadow is obtained. However, it is not a good plan to use a spotlight on one side as a source, and another spotlight with a spun glass diffuser on the other side as a fill light. In some cases, however, this has to be done—such as in process photography—and a second shadow is cast even though it is softer and less defined. These second shadows always betray the use of artificial light. It is better to use one of the light units especially designed for producing shadowless fill light.

When light is reflected from a large area such as the sky, or a large white-painted reflector, the light then originates from all over the area instead of a point source—so that no sharp shadow can result. These units are made in small sizes for close work, and much larger units are used where big areas are to be lighted.

As I mentioned in connection with the light of nature, fill light is actually coming from all directions—including back light. Ideally, it would be more realistic to illuminate our subjects with a row of fill lights all around the rear of our set for that round, three-dimensional effect. In some cases this is done, such as in fog scenes or in ice rink scenes, where the many direct shadows cast by a group of spotlights from the rear would be annoying. But we have a problem here and must make a compromise, for this "surround" or back light must be shadowed out of the lens, and it is almost impossible to gobo or barndoor a fill light. The compromise is to shade off all the conflicting shadows coming from all directions except the key source, so that we have the use of the light on the subject only and none of it spills over the floor. Otherwise these shadows tell the viewer that a lot of units have been used. And if the viewer starts counting the shadows, then he has missed the point of the scene.

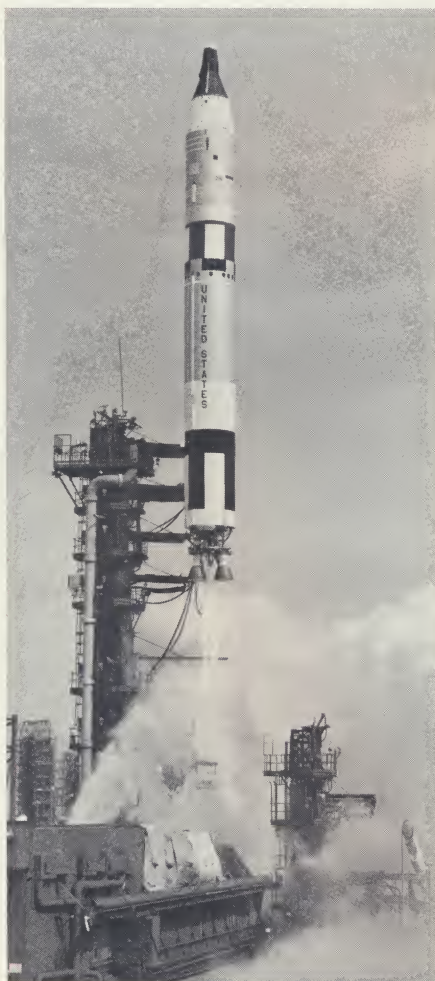
Cleverly used, additional spotlights are frequently employed to highlight and enhance the texture of fabrics, hair, clothes, and other objects, to make them appear "rich" and more attractive. These small lights are equipped with snoots or barndoors to localize the light so that it augments (but does not conflict with) the main source. This use of light is one of the finer points of lighting—the aim being to make the subject appear to its best advantage. Other types of light units are manufactured for special uses, and they all have their proper place in the modern studio.

It follows that what I have indicated about the laws of lighting applies to any type of light unit—arcs, incandescent lights, reflectors, tungsten-halogen "quartz" lights, or even candles. Fortunately we now have available lighting units which are more convenient, economical, and also less heavy than in the past. In modern studios, tungsten-halogen "quartz" lights are replacing the older, more cumbersome lights. The lighting controls now available, such as lightweight dimmers, barndoors, snoots, scrims, filters, and other accessories, make the tungsten-halogen "quartz" lights as flexible and as effective for creating expert lighting as any ever made. Such a satisfactory tool is a joy and a pleasure to use.



▲ Inside an Atlas missile silo. Shown are two ColorTran LEX-64 explosion-proof lights mounted on a pan and tilt head together with a Dage environmental television camera for use in remote surveillance. ColorTran explosion-proof lights were employed during the development of the Atlas rocket, which was used as the launch vehicle for Project Mercury missions.

▼ Gemini II lift-off with Astronauts Conrad and Gordon aboard. ColorTran LEX-38 converter-powered explosion-proof lights were used during the development of the Titan II rocket (shown above), which was employed as the launch vehicle for Project Gemini missions.

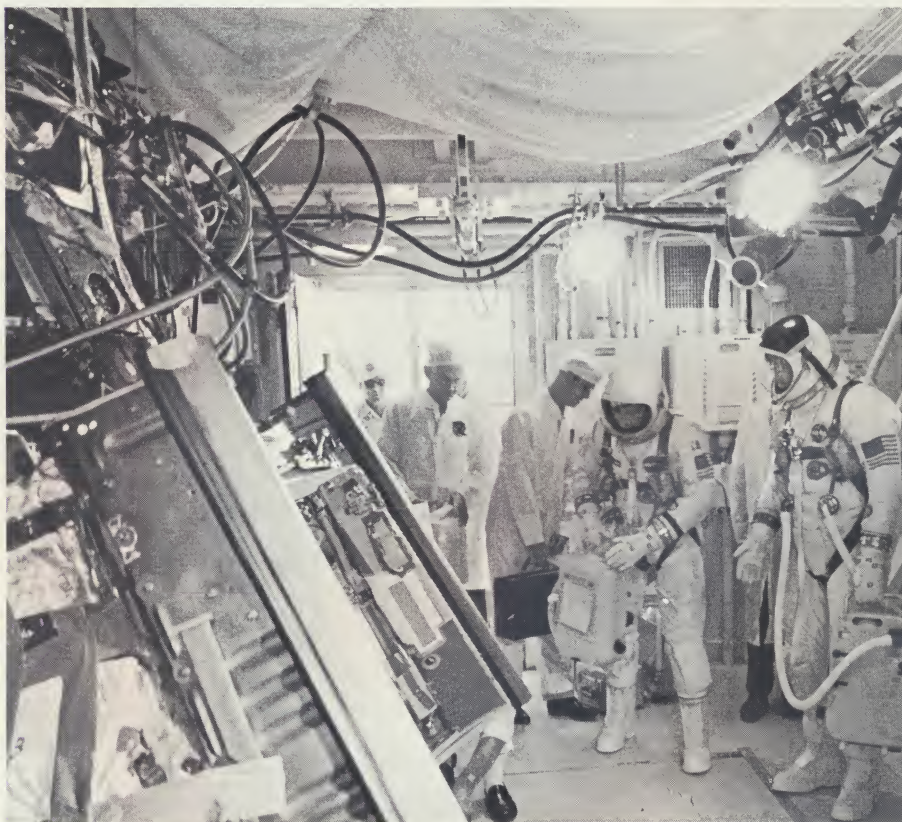


MERCURY, GEMINI... AND NOW, APOLLO!

ColorTran explosion-proof lights have been used for photographic recording and television monitoring purposes in almost all the United States Space Age programs, such as Projects Mercury and Gemini, the Atlas and Titan II Programs, and many others. A most dramatic example of their versatility can be seen in their recent application by North American Aviation's Space and Information Systems Division in photo-instrumentation tests recording and measuring the deflection effects in the outboard "J-2" engines located on the second stage of the NASA Saturn V "moon" rocket. Project Apollo missions — including the long awaited manned-flight to the moon

— will all be launched by the Saturn V rocket.

The recently introduced ColorTran LEX-3 explosion-proof light was employed as a self-illuminating reference "target" during the "J-2" engine deflection test. The extremely compact LEX-3, measuring only 4½ inches deep and 3 inches in diameter, was mounted directly on the T-ring of one of the outboard Saturn second stage "J-2" engines. The specially designed ColorTran LEX-3 reflector re-images the tungsten-halogen "quartz" lamp element as a *point of light* directly in front of the LEX-3 fixture. This direct incident *point of light* "target" provided by the LEX-3 was able to

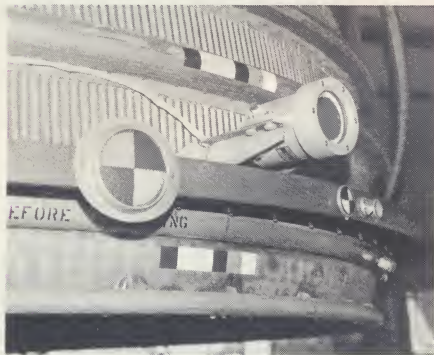


▲ Gemini 10 Astronauts John Young and Michael Collins in the "white room" located at the top of the launching pad gantry. Overhead are ColorTran LEX-64 explosion-proof lights equipped with special heat filters, together with television, motion picture, and still photographic cameras used to monitor and record their entry into the Gemini 10 spacecraft. The high-intensity LEX-64 explosion-proof lights were similarly employed throughout the extensive Project Mercury and Project Gemini space exploration flights.

penetrate the vapors and flames produced by the "J-2" rocket engines during the test firings with high visibility. The LEX-3 explosion-proof light survived a full 650 seconds of "J-2" engine blast during the test.

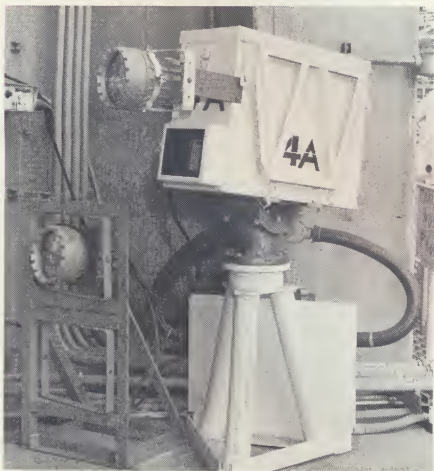
The high-intensity ColorTran LEX-64 explosion-proof lights, using 1000-watt PAR 64 tungsten-halogen "quartz" lamps, were employed during this same test to illuminate reflective targets which were also affixed to the "J-2" engine. The LEX-64 is the most powerful light certified to military specifications for use in hazardous atmospheres . . . including hydrogen. The LEX-64 light head can be rotated 360° for proper orientation of the rectangular beam pattern of the PAR 64 lamp while the light is in operation—and without affecting the explosion-proof and rain-tight integrity of the housing.

A special ColorTran heat filter is avail-



L The ColorTran LEX-3 explosion-proof "target" light shown mounted on a North American Aviation-built "J-2" rocket engine. Also shown are the different reflective-type targets used during the deflection test.

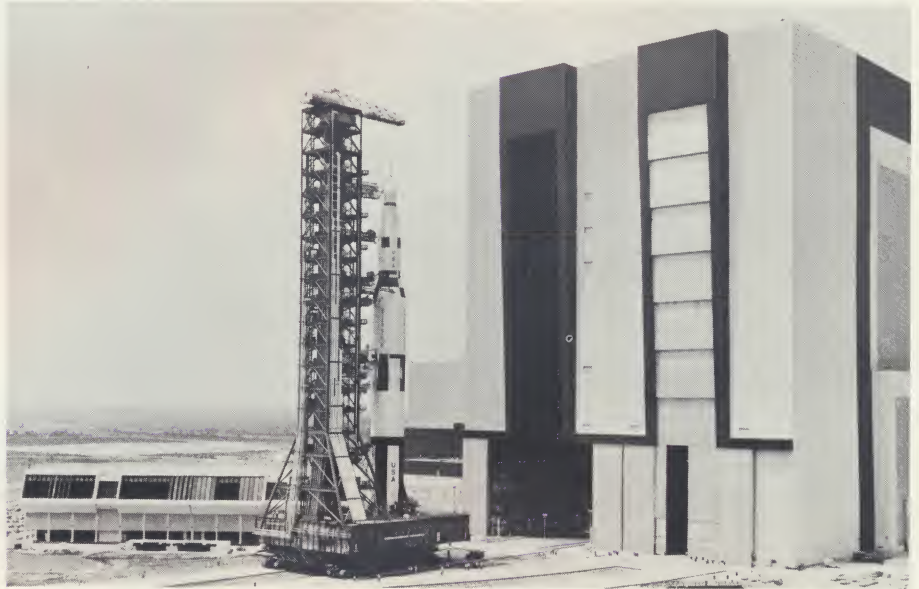
Two ColorTran LEX 64 explosion-proof lights shown together with one of the two environmental motion picture instrumentation cameras which were used to record the special "J-2" rocket engine deflection test. Light from the LEX-64's was able to penetrate the flames and vapors produced by the "J-2" engines and reach the reflective targets.



able for use with the LEX-64 which reduces radiant energy by approximately 85% while reducing visible light output by approximately 15%. This is especially important when this light is used in areas such as the "white room" where additional heat would mitigate the effect of the portable refrigeration units carried and used by the Astronauts just prior to entry into their spacecraft. LEX-64 light units are also available in a black-anodized finish for special applications, such

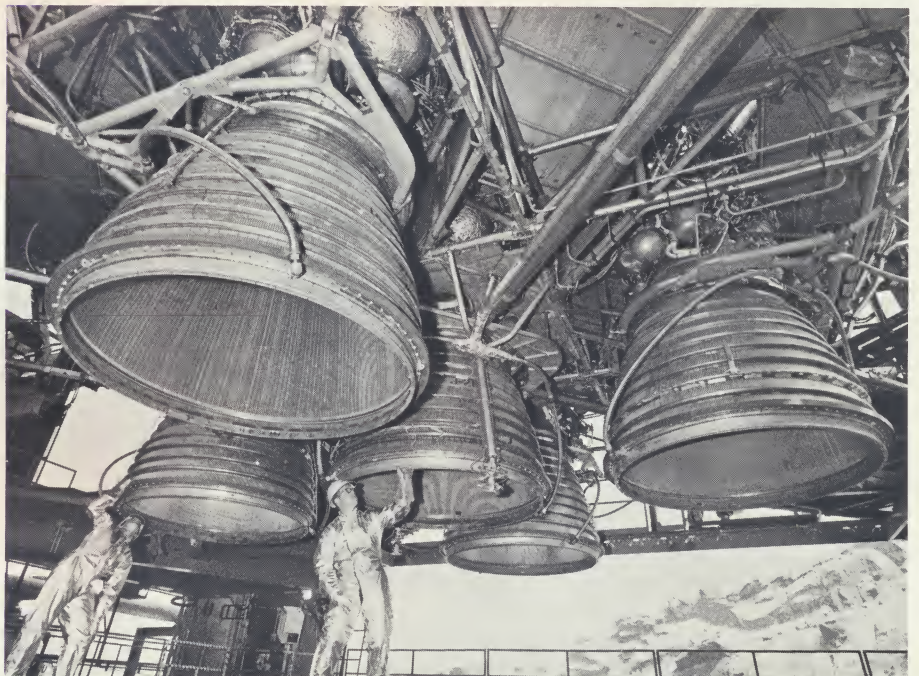
as high-altitude chambers, where conditions for convective heat transfer are limited.

In addition to rocket and space program applications, the ColorTran "family" of explosion-proof lights (the LEX-64, the LEX-38, and the new miniature LEX-3) are ideal for use wherever hazardous atmospheres are encountered — such as hospital operating rooms, environmental test chambers, and research laboratories.



L The huge NASA Saturn V "moon" rocket shown on the new mobile launching pad outside its massive "hangar" at Kennedy Space Center. Saturn V will be used as the launch vehicle for the 3-man Apollo spacecraft.

Preparations being made at North American Aviation's Santa Susana installation, located in California, for a "Battleship" ground test firing of five "J-2" engines similar to those which will power the second stage of the Saturn V rocket. One of the environmental motion picture cameras can be seen at the rear of the test installation platform.



LIGHTING LIVE COLOR TV

By Joseph N. Tawil
Eastern Marketing Manager
ColorTran Industries, Inc.

The rising change-over to live color broadcasting presents some lighting problems for the engineering staff of today's television station. As the new color cameras are received into the old plants, production personnel are rushing to broadcast in color without all the facilities they would like to have available. The usual problem encountered is a limited power supply and limited lighting equipment. The chief engineer presented with the challenging task of converting his studio to live color must provide the *proper lighting system* for color telecasting.

Monochrome studios originally equipped to provide 150 to 250 footcandles will be hard pressed to generate the 350 to 450 footcandle levels normally required for quality live color television broadcasting. By using the new, highly efficient tungsten-halogen "quartz" sources, the chief engineer and his production staff can bring in higher footcandle levels with the older and relatively limited power supplies available. It has been our experience that the TV color cameras being supplied today respond well in the 350 to 450 footcandle range. In most studio productions, as well as news broadcasts, where we have had the opportunity to take light meter readings, the average footcandle level has been running above 400 FC.

Color reproduction is sensitive to variations in light intensities, not only in the appearance of a gray scale but also in an actual change in color. It becomes most important in color broadcasting to control the set lighting and to be able to achieve the saturation of color desired for contrast and color control on the live camera. Sharply cut off beams of light often present problems on the background that are not easily masked from the color camera.

NEW EQUIPMENT FOR THE COLOR STUDIO

Selecting more efficient lighting equipment to do the job for color telecasting is not an easy task. We are confronted with a tradition



WBEN-TV (Buffalo, N.Y.) getting ready for live color. The lighting in the main studio has been converted to ColorTran "quartz" lights. There will be no change in the existing air conditioning system.



Walter R. Wright, Electrician (Local 1, IATSE), shown at WNEW's ColorTran Dimmer Control Console. Standing from left to right are William Kelly, WNEW-TV Chief Engineer; Joseph N. Tawil of ColorTran; and Carl Gaiti, WNEW-TV Lighting Director. Some of the 400 ColorTran "quartz" lighting fixtures recently installed in WNEW-TV's Studio 5 can be seen overhead. WNEW-TV is Metro-media's New York City outlet.

of lighting that has not changed much in the last twenty years. One of these traditional "basic" concepts of lighting fixtures in the studio is circular design. We are presented with lenses that are round, scoops that are round, and reflectors that are spherical. However, we are often lighting areas that are rectangular in shape rather than circular, and light patterns that would give rectangular beams would be more efficient in utilization than fixtures that give us circles of light.

The rectangular pattern of the ColorTran Broad is most convenient for covering large performing areas and for illuminating an audience. In addition, this unit can be barndoor controlled, which is rather unique in a unit basically used for broad fill lighting. This added element of control is most helpful in eliminating boom shadows, as well as annoying glare where rear screen projection is used. Focusing broads are used to further increase lighting efficiency for long throws. With the ColorTran Focusing Broad we are able to narrow the beam spread and achieve higher intensities in a given area. This additional flexibility can be measured in higher footcandle levels in the performing area.

The ColorTran Multi-Beam 1000 is a spot light which focuses from a very flat, wide flood position to a high intensity, narrow spot. However, unlike conventional spot lights used in studios, the Multi-Beam 1000 does *not* produce a hard-edged shadow which presents problems in blending one unit into the next. The Multi-Beam 1000 produces a soft, feathered edge which in color telecasting eliminates the shift in color in the area where this ring of light might hit the background or performers. The Multi-Beam 1000 can be barndoor and controlled sufficiently for most studio requirements. It is an excellent key light or back light. Barndoor cutoff is sharp enough to frame a painting used as a prop on the set.

Lighting the background separately from the foreground is a most important requirement for color telecasting. We must be able to control the intensity of the background to provide separation and color control. This can easily be achieved with just a few special ColorTran set lights. (Because of its *photographic application*, this unit is referred to as a *Back-Lite* in the ColorTran catalog.) This efficient unit has a specially designed reflector to provide relatively even illumination from top to bottom of the set when mounted above the set level. The fixture is equipped with barndoors which provide a very sharp cutoff at both top and bottom to eliminate any spill on performers coming close to the set, and which also provide sharp cutoff at the top of the set piece. With three or four 1000-watt fixtures we could provide a 20-foot long set piece with its own illumi-

nation, and we would be able to increase or decrease the lighting level when desired. A set piece 11 feet high and 20 feet long lit with four 1000-watt ColorTran LQB/B "Set-Lites" (from a 14-foot grid positioned 3 feet forward from the set) will read over 200 footcandles.

An excellent source for fill light is the ColorTran Soft-Lite. Three LQBS-20, 2000-watt Soft-Lites used to light the acting area in front of a 20-foot long set piece from a 14-foot grid will provide a fill of approximately 200 footcandles. This is a completely diffused source which is virtually shadowless. It is highly useful for lighting elderly persons with strong facial features. This source is also highly suitable for specular objects, products that are cellophane wrapped, glassware, and other glossy objects. Because the light is totally diffused, we sacrifice some efficiency in terms of lumen output per watt. However, it is a totally new and different light source to the television studio, and with it we are able to achieve effects that have not been easily accomplished in the past.



ColorTran "quartz" lighting shown in use with the RCA TK-42 color TV camera in the Radio Corporation of America's exhibit area at the recent NAEB Conference in Kansas City.

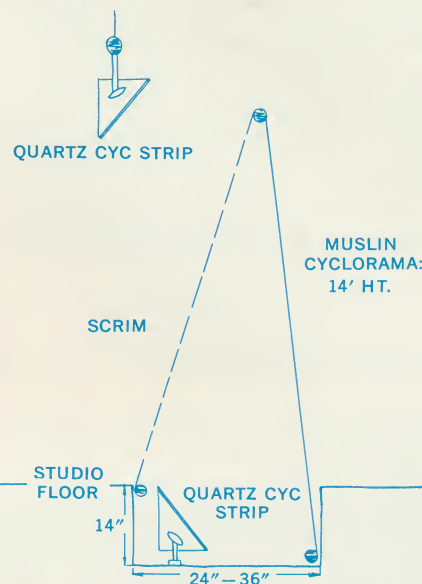
CYCLORAMA LIGHTING FOR COLOR TV

Though there is a difference in the skin tones of every individual, we are able to recognize an acceptable color for the human skin. And this becomes the audience's constant reference point while viewing television. The real chance to employ large washes of dramatically bold color comes, therefore, when cycloramas are used. Production personnel are finding cyclorama lighting most effective and most important in color broadcasting. "Quartz" lamps are ideally suited for the design of cyclorama strips. We have found them to be extremely efficient sources for providing washes of light on large surfaces.

Cyclorama lighting consumes a great amount of electrical power, and the engineer very much concerned with available power might well consider a two-color system for cyclorama lighting. A three-color primary source cyc strip with which we can mix the primaries to achieve any color in the rainbow, plus a fourth clear circuit for desaturating colors, would be ideal. However, when we use primary color filters, we block out over 90% of the light output. This light loss is critical where there is any kind of power limitation. By using two-color circuits and selecting secondary color filters, we can achieve a fairly large range of colors on the cyclorama. And by changing the color filters, we can expand the range of color available. In practice this has proved very acceptable for some studios. Naturally, if power and funds are available, the three-color system is more desirable. The following sketch shows an ideal lighting arrangement for a cyclorama, with the horizon at ground level for optimum results. Few studios have taken the trouble to build such

a light pit for a cyclorama. However, there is no better way to achieve a truly effective cyclorama.

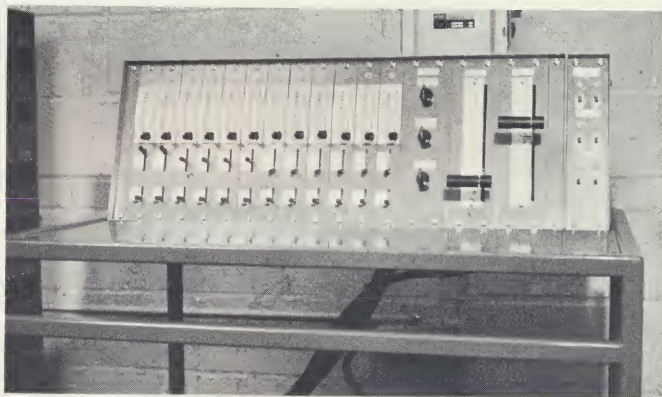
The cyclorama light pit places the horizon at ground level and eliminates the need for ground rows. The opaque white muslin drop is tilted forward to permit more even illumination from the bottom "quartz" cyc strip. A translucent scrim provides a sense of depth and is lit with a top "quartz" cyc strip.



LIGHTING CONTROL

Once the type of lighting equipment has been selected and a fixture schedule established for the studio, our attention turns to the question of dimming. Do we need dimmers? If so, how many and what type? It is possible to achieve good lighting without a dimmer board, but—extremely difficult. Where time is limited, as it is in most studios, the dimmer board is a must.

Though we are concerned with the color temperature of our light source, there is room for variation. Dimmers are a necessity for mixing cyclorama colors, balancing set lights, and adjusting lighting ratios. The use of dimmers will also help extend lamp life. Major color television studios do employ dimming systems and use them extensively. Remote controlled, solid state dimming systems are highly reliable, and they can be provided at prices comparable to any mechanical system now available. Such dimming systems are economically practical even for the smallest studio.



ColorTran Dimmer Console at WBEN-TV for remote control of 12 solid state ColorTran SCR 6KW dimmers and 6 non-dims. The unit can be rolled easily to any location on the studio floor or placed in the control room.

NO LIGHT, NO PICTURE

There are three essential elements to a television production: the reproduction system, the performance, and light. The television system itself is a two-dimensional media; it has a measurable height and width. We create the illusion of depth with camera technique, skillful production, and, most important, good lighting. Good lighting gives television its third dimension—that extra snap that means the difference between a technically acceptable picture and a truly good picture. Good lighting is an essential element in a properly functioning TV studio. It is important that the proper lighting equipment be made available to the studio production staff so that the new color TV cameras can perform at their optimum levels.

IS PARIS BURNING?

SHOT ON LOCATION WITH CINEKINGS...

For the filming of the actual location sequences of the new film "Is Paris Burning?" (produced by Paul Graetz and recently released by Paramount Pictures), Directors of Photography Marcel Grignon and Jean Tournier relied on high intensity ColorTran CineKing converter-powered lights to supplement available light. Most of the outdoor Paris location sequences were shot between 5 o'clock in the morning and noon. Two production teams worked simultaneously in different Paris locations in order to speed filming, and combined into a single unit to shoot particularly complicated scenes.

Director René Clement—famous for such critically acclaimed films as the documentary "Battle of the Rails" and "Forbidden Games"—recreated with startling authenticity the Liberation of Paris at the end of World War II by filming many scenes on some 180 actual locations throughout the city of Paris. All the film production equipment—including ColorTran lighting—used on location in the shooting of "Is Paris Burning?" was supplied by Chevereau, the largest professional film equipment house in France.

Many thousands of ColorTran Cine-



Director René Clement (holding 'seat-cane') discusses a scene in "Is Paris Burning?" with Jean-Paul Belmondo, who plays Morandat. Directly overhead are five ColorTran CineKing lights.

Kings—like those used in filming "Is Paris Burning?"—are in continual use by film production units throughout the world. To make these very popular high intensity lighting units even more versatile, ColorTran Industries, Inc. has recently introduced a specially designed *intensifier adapter* which is easily attached to the CineKing fixture, permitting the use of either a specular intensifier or a diffuse intensifier depending on the specific shooting requirements.

A CineKing, used together with an *intensifier adapter* and specular intensifier, will increase in intensity by 310% (with

a corresponding decrease of 70% in beam area coverage). When used with an *intensifier adapter* and diffuse intensifier, the CineKing will increase in intensity by 30%, with *no* change in total area coverage (but with a "rounding" of the beam pattern). The new *intensifier adapter* (and choice of intensifiers) can also be attached to the equally popular ColorTran Cine Queen fixtures—both the "boosted" and "non-boosted" models. More detailed technical data on the new *intensifier adapter* (and the two different intensifiers, as well as specially fitted carrying cases) is available on request.



▶ A ColorTran CineKing light shown together with the newly available intensifier adapter and a specular intensifier.

▶ Preparations are made to film a mass scene within the Paris Prefecture of Police building grounds. Some twenty ColorTran high intensity CineKing lights (seen center-bottom) were used to supplement available light in this scene.



Your **ColorTran** Dealer